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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/678,156	LIM, GUK-CHAN	
	Examiner	Art Unit	
	Nghi H. Ly	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-8,10-30,33-37,40,41,43-46 and 50-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8,10-30,33-37,40,41,43-46 and 50-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 6, 12, 21, 26, 30, 37, 40, 50 and 55 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1, 6, 12, 21, 26, 30, 37, 40, 50 and 55, the newly added claimed limitation recites "wherein the call is re-established between the first and second mobile terminals through a signal path that **does not** pass through an intervening or repeating subscriber terminal".

However, applicant's FIG.1, discloses that the first and second mobile terminals through a signal path that **does** pass through an intervening or repeating subscriber terminal, which is a base station 20. In this case, the base station 20 is a repeater. In addition, applicant's remarks (04/03/08, page 23, lines 1-5) admitted that the newly added claimed limitation has been supported by the specification [32] to [39] or applicant's FIG.1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3, 30, 40 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Olds (US 6,757,263).

Regarding claims 1, 30, 40 and 55, Murphy teaches a mobile communication system (see Abstract, column 1, line 7 to column 2, line 35), comprising: a base station (see Abstract, where Murphy teaches "wireless telephone", and "wireless telephone network", the "wireless telephone network" of Murphy does indeed has a base station) and a first mobile terminal which transmits state information of the first mobile terminal to the base station (column 2, lines 1-9 and column 2, lines 28-37), wherein the base station transmits the state information to a second mobile terminal (column 2, lines 1-9 and column 2, lines 28-37) to inform the second mobile terminal that a call was released based on a low signal strength of the first mobile terminal (column 2, lines 1-9 and column 2, lines 28-37), wherein the second mobile terminal monitors the signal strength of first mobile terminal after the call release and performs an automatic call connection operation to re-establish the call (see column 3, line 47 to column 4, line 17, and column 4, lines 37-44, column 4, line 63 to column 6, line 12, the signal strength of the mobile terminal depends on the signal or the level of energy of the battery), wherein **one of** the

first mobile terminal or second mobile terminal is the call originating terminal and **the other** of the first mobile terminal or second mobile terminal is the call receiving terminal (see Abstract, column 1, line 7 to column 2, line 35), wherein the first and second mobile terminals are subscriber terminals and wherein the call is re-established between the first and second mobile terminals through a signal path that does not pass through an intervening or repeating subscriber terminal (see column 2, lines 24-35, see "again").

Murphy does not specifically disclose performing an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level.

Olds teaches performing an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level (see column 14, lines 2-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Olds into the system of Murphy in order to provide a communication networks in which repeating subscriber units are interconnected through wireless communication links (see Olds, column 1, lines 5-9).

Regarding claim 3, Murphy further teaches the base station receives state information of the second mobile terminal and transmits the state information of the second mobile terminal to the first mobile terminal (column 2, lines 1-9 and column 2, lines 28-37).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Olds (US 6,757,263) and further in view of Toda (US 6,275,713) and Hayashi (US 6,650,913).

Regarding claim 4, the combination of Murphy and Olds teaches the first mobile terminal (see Murphy, Abstract).

The combination of Murphy and Olds does not specifically disclose a memory which stores a call list which includes a phone number of the second mobile terminal, a key panel including a call termination button, a timer which counts pre-set time after a call is released because of a network failure, and an MSM unit, a mobile station modem unit which controls transmission of the state information of the first mobile terminal to the base station, senses a received signal strength of the second mobile terminal when a call connection between the first and second mobile terminals is released because of a network failure, and performs an automatic call connection function in response to the second call connection release.

Toda teaches a memory which stores a call list which includes a phone number of the second mobile terminal (see Toda, column 2, lines 48-62, see "storing" and "storage"), a key panel including a call termination button (see Toda, column 1, lines 16-25 and column 8, lines 40-55), a timer which counts pre-set time after a call is released because of a network failure (see Toda, column 10, lines 30-36), and an MSM unit (see Toda, fig.1, processing section 14), a mobile station modem unit which controls transmission of the state information of the first mobile terminal to the base station (see Toda, fig.1, control section 11, and see Abstract, Toda teaches cellular phone, in order

to communicate between cellular phones, the teaching of Toda inherently teaches a base station), senses a received signal strength of the second mobile terminal when a call connection between the first and second mobile terminals is released because of a network failure (see Toda, Abstract and column 1, lines 16-25 and column 8, lines 40-55, see "strength"), and performs an automatic call connection function in response to the second call connection release (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "automatically").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Toda into the system of Murphy and Olds in order to provide a cellular phone capable of smoothly reinitiating a call (see Toda, column 1, lines 5-9).

The combination of Murphy, Olds and Toda does not specifically disclose a detecting sensor for judging whether a flip or a folder of the first mobile terminal is opened.

Hayashi teaches a detecting sensor for judging whether a flip or a folder of the first mobile terminal is opened (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of Murphy, Olds and Toda in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

The combination of Murphy, Olds, Toda and Hayashi does not specifically disclose a display which displays the state information of the second mobile terminal received from the base station.

Oota teaches displaying a display which displays the state information of the second mobile terminal received from the base station (see [0031]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Oota into the system of Murphy, Olds, Toda and Hayashi in order to enable users to recognize that a multimedia file containing no image data is being normally reproduced (see Oota, [0008]).

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Olds (US 6,757,263) and further in view of Chapman et al (US 4,775,995).

Regarding claims 5 and 6, the combination of Murphy and Olds teaches a method of managing communications in a mobile communication system (Murphy, Abstract), comprising: storing state information transmitted from a first mobile terminal (see Murphy, column 4, lines 17-44), the state information indicative of a signal strength of the first mobile terminal (see Murphy, column 3, line 47 to column 4, line 17, and column 4, lines 37-44, column 4, line 63 to column 6, line 12, the signal strength of the mobile terminal depends on the signal or the level of energy of the battery) monitoring a call connection between the first mobile terminal and a second mobile terminal and transmitting the stored state information (see Murphy, column 3, line 47 to column 4,

line 17, and column 4, lines 37-44, column 4, line 63 to column 6, line 12, the signal strength of the mobile terminal depends on the signal or the level of energy of the battery) transmitted from the first mobile terminal to the second mobile terminal when the call connection between the first and second mobile terminals is terminated (see Murphy, column 2, lines 1-9 and column 2, lines 28-37), wherein the first and second mobile terminals are subscriber terminals and wherein the call is re-established between the first and second mobile terminals through a signal path that does not pass through an intervening or repeating subscriber terminal (see column 2, lines 24-35, see "again").

The combination of Murphy and Olds does not specifically disclose storing, state information in a base station.

Chapman teaches storing, state information in a base station (see column 9, lines 44-48 and column 10, lines 5-9, see "*signal strength value*" and it reads on applicant's "*state information*").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Chapman into the system of Murphy and Olds in order to provide an improved method and arrangement for adaptively controlling the amount of adjacent channel interference (see Chapman, column 2, lines 46-49).

7. Claims 7, 8, 10, 12-14 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Olds (US 6,757,263) and further in view of Chapman et al (US 4,775,995) and Toda (US 6,275,713).

Regarding claims 12 and 19, The combination of Murphy and Olds teaches a method of managing calls in a mobile communication system (See Murphy, Abstract), comprising: connecting a call between an originating side terminal and a receiving side terminal (see Murphy, column 2, lines 1-9 and column 2, lines 28-37), periodically storing state information transmitted from at least one of the originating side and receiving side terminals (see Murphy, column 4, lines 17-44), monitoring a call connection between the originating side and receiving side terminals (see Murphy, column 3, line 47 to column 4, line 17, and column 4, lines 37-44, column 4, line 63 to column 6, line 12, the signal strength of the mobile terminal depends on the signal or the level of energy of the battery), when the originating side and receiving side terminals are in a call connection state, storing status information for each of the terminals (see Murphy, column 4, lines 17-44), wherein the first and second mobile terminals are subscriber terminals and wherein the call is re-established between the first and second mobile terminals through a signal path that does not pass through an intervening or repeating subscriber terminal (see column 2, lines 24-35, see "again").

The combination of Murphy and Olds does not specifically disclose storing state information transmitted from at least one of the originating side and receiving side terminals in a base station.

Chapman teaches storing state information transmitted from at least one of the originating side and receiving side terminals in a base station (see column 9, lines 44-48 and column 10, lines 5-9, see "*signal strength value*" and it reads on applicant's "*state information*").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Chapman into the system of Murphy and Olds in order to provide an improved method and arrangement for adaptively controlling the amount of adjacent channel interference (see Chapman, column 2, lines 46-49).

The combination of Murphy, Olds and Chapman does not specifically disclose when the call connection between the terminals is interrupted, checking whether the call has been interrupted because of a network failure, when the call has been interrupted because of a network failure, automatically attempting a recall from the originating side terminal, when a call termination message is received from the originating side terminal or from the receiving side terminal, releasing the call connection between the terminals at the base station, and transmitting the state information of one of the originating side and receiving side terminals to the other of the originating side and receiving side terminals after the call connection release.

Toda teaches when the call connection between the terminals is interrupted, checking whether the call has been interrupted because of a network failure (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection"), when the call has been interrupted because of a network failure, automatically attempting a recall

from the originating side terminal (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "reestablishment"), when a call termination message is received from the originating side terminal or from the receiving side terminal, releasing the call connection between the terminals at the base station (see Abstract, Toda teaches cellular phone, in order to communicate between cellular phones, the teaching of Toda inherently teaches a base station), and transmitting the state information of one of the originating side and receiving side terminals to the other of the originating side and receiving side terminals after the call connection release (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "reestablishment").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Toda into the system of Murphy, Olds and Chapman in order to provide a cellular phone capable of smoothly reinitiating a call (see Toda, column 1, lines 5-9).

Regarding claim 7, Murphy further teaches receiving an originating signal from the second mobile terminal (column 2, lines 1-9 and column 2, lines 28-37), transferring a terminating signal to the first mobile terminal (column 2, lines 1-9 and column 2, lines 28-37), receiving the state information from the first mobile terminal in response to the terminating signal (column 2, lines 1-9 and column 2, lines 28-37).

Regarding claim 8, Murphy further teaches sensing whether the call interruption has occurred because of a network failure (column 2, lines 1-9 and column 2, lines 28-37).

Regarding claim 10, Murphy further teaches receiving a call termination message

(column 2, lines 1-9 and column 2, lines 28-37), transferring the stored state information transmitted from the first mobile terminal to the second mobile terminal in response to the call termination message (see Murphy, column 4, lines 17-44).

Regarding claim 13, the combination of Murphy, Olds, Chapman and Toda further teaches transferring an originating signal from the originating side terminal to the base station (see Chapman, fig.1, wireless connection between devices), transferring a terminating signal from the base station to the receiving side terminal (see Chapman, fig.1, wireless connection between devices), and transferring a response message from the receiving side terminal to the base station in response to the terminating signal, thereby forming a traffic channel (see Chapman, fig.1, wireless connection between devices).

Regarding claim 14, the combination of Murphy, Olds, Chapman and Toda further teaches the state information includes one of battery voltage information, an RSSI, and ON/OFF information of at least one of the terminals (see Murphy, Abstract).

Regarding claim 16, the combination of Murphy, Olds, Chapman and Toda further teaches checking whether the call connection has been interrupted because of a network failure; starting a timer; judging whether a call termination message has been received; monitoring an RSSI (see Toda, Abstract and column 1, line 55 to column 4, lines 21, see "strength"), and transmitting a recall signal if the RSSI is greater than a predetermined reference value (see Toda, Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "reestablishment" and "abort").

Regarding claim 17, the combination of Murphy, Olds, Chapman and Toda

further teaches paging a phone number stored in a memory unit of the originating side terminal; and transmitting an originating call (see Toda, Abstract and column 1, line 55 to column 4, lines 21).

Regarding claim 18, the combination of Murphy, Olds, Chapman and Toda further teaches if the timer elapses or a call termination message is received, terminating the recall attempting step of the originating side terminal (see Toda, column 10, lines 30-36).

Regarding claim 20, the combination of Murphy, Olds, Chapman and Toda further teaches displaying the received state information on a display unit (see Toda, column 8, lines 1-6 and column 8, lines 56-62).

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Olds (US 6,757,263) and Chapman et al (US 4,775,995) and further in view of Toda (US 6,275,713) and Hayashi (US 6,650,913).

Regarding claim 11, the combination of Murphy, Olds, Chapman and Toda teaches the method of claim 10. The combination of Murphy, Olds, Chapman and Toda does not specifically disclose the call termination message is generated by a call termination button of a key panel unit of the first mobile terminal or as a result of a folder or flip of the first mobile terminal being closed.

Hayashi teaches the call termination message is generated by a call termination button of a key panel unit of the first mobile terminal or as a result of a folder or flip of the first mobile terminal being closed (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of Murphy, Olds, Chapman and Toda in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Olds (US 6,757,263) and Chapman et al (US 4,775,995) and further in view of Toda (US 6,275,713) and Hayashi (US 6,650,913).

Regarding claim 15, the combination of Murphy, Olds and Chapman and Toda teaches the method of claim 12. The combination Murphy, Olds and Chapman and Toda does not specifically disclose the call termination message is generated by a call termination button of a key panel unit of one of the terminals or as a result of detection of a folder or a flip of one of the terminals closing.

Hayashi teaches the call termination message is generated by a call termination button of a key panel unit of one of the terminals or as a result of detection of a folder or a flip of one of the terminals closing (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of the combination of Murphy, Olds and Chapman and Toda in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

10. Claims 21, 23, 25, 33-36, 41, 43-46 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Toda (US 6,275,713).

Regarding claim 21, Murphy teaches a method of managing calls in a mobile communication system (see Abstract), comprising: connecting a call between an originating side terminal and a receiving side terminal, transmitting state information of the originating side terminal to a base station (see column 2, lines 1-9 and column 2, lines 28-37), wherein the first and second mobile terminals are subscriber terminals and wherein the call is re-established between the first and second mobile terminals through a signal path that does not pass through an intervening or repeating subscriber terminal (see column 2, lines 24-35, see "again").

Murphy does not specifically disclose checking whether a call termination message is input from a user in response to a call interruption, sensing whether a received signal strength transmitted by one of the originating or receiving side terminals to the other of the originating or receiving side terminals is restored to a RSSI is restored to a level sufficient to make a call available, if the RSSI is restored, automatically attempting a recall based on a phone number stored in a memory, when the call to the receiving side terminal is terminated, receiving state information of the receiving side terminal, and displaying the state information indicative of the signal strength of the receiving side terminal on the originating side terminal.

Toda teaches checking whether a call termination message is input from a user in response to a call interruption (see Abstract and column 1, line 55 to column 4, lines

21, see "disconnection"), sensing whether an RSSI is restored to a level sufficient to make a call available (see Abstract and column 1, line 55 to column 4, lines 21, see "storing", "strength"), when the RSSI transmitted by one of the originating or receiving side terminals to the other of the originating or receiving side terminals is restored, automatically attempting a recall based on a phone number stored in a memory, when the call to the receiving side terminal is terminated (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "automatically"), receiving state information of the receiving side terminal (see Abstract and column 1, line 55 to column 4, lines 21), and displaying the state information indicative of the signal strength of the receiving side terminal on the originating side terminal (see column 8, lines 1-6 and column 8, lines 56-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Toda into the system of Murphy in order to provide a cellular phone capable of smoothly reinitiating a call (see Toda, column 1, lines 5-9).

Regarding claim 23, the combination of Murphy and Toda further teaches starting a timer when the call interruption is detected and judging that the call interruption resulted from a network failure when the timer expires (see Toda, column 10, lines 30-36).

Regarding claim 25, the combination of Murphy and Toda further teaches if the timer elapses or the call termination message is input (see Toda, column 10, lines 30-36), the originating side terminal terminates the recall attempting step and then

terminates a call to the receiving side terminal (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "reestablishment" and "reinitiates").

Regarding claim 33, Murphy further teaches transmitting the operational state information to a base station (see Murphy, column 2, lines 1-9 and column 2, lines 28-37), and transmitting the operational state information from the base station to the second mobile terminal (see Murphy, column 2, lines 1-9 and column 2, lines 28-37).

Regarding claim 34, Murphy further teaches detecting termination of a call between the first and second mobile terminals and transmitting the operational state information from the base station to the second mobile terminal in response to the detected call termination (see Murphy, column 2, lines 1-9 and column 2, lines 28-37).

Regarding claim 35, the combination of Murphy and Toda further teaches detecting a network failure during a call between the first and second mobile terminals and automatically transmitting a recall request from the second mobile terminal to the first mobile terminal in response to detection of the temporary network failure (see Toda, Abstract and column 1, line 55 to column 4, lines 21).

Regarding claim 36, the combination of Murphy and Toda further teaches the recall request is automatically transmitted based on a last-stored phone number stored in the second mobile terminal, said last-stored phone number corresponding to the first mobile terminal (see Toda, Abstract and column 1, line 55 to column 4, lines 21).

Regarding claim 41, the combination of Murphy and Toda further teaches the first mobile terminal is a called terminal and the second mobile terminal is a calling terminal (see Toda, Abstract and column 1, line 55 to column 4, lines 21).

Regarding claim 43, the combination of Murphy and Toda teaches receiving the operational state information in a base station and transmitting the operational state information from the base station to the second mobile terminal (see Toda, Abstract and column 1, line 55 to column 4, lines 21, Toda teaches cellular phone, in order to communicate between cellular phones, the teaching of Toda inherently teaches a base station).

Regarding claim 44, the combination of Murphy and Toda further detecting termination of a call between the first and second mobile terminals and transmitting the operational state information from the base station to the second mobile terminal in response to the detected call termination (see Toda, Abstract and column 1, line 55 to column 4, lines 21, Toda teaches cellular phone, in order to communicate between cellular phones, the teaching of Toda inherently teaches a base station).

Regarding claim 45, the combination of Murphy and Toda further teaches detecting a network failure during a call between the first and second mobile terminals; and automatically transmitting a recall request from the second mobile terminal to the first mobile terminal in response to detection of the temporary network failure (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "automatically").

Regarding claim 46, the combination of Murphy and Toda further teaches the recall request is automatically transmitted based on a last-stored phone number stored in the second mobile terminal, said last-stored phone number corresponding to the first mobile terminal (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "storing", "storage").

Regarding claim 56, the combination of Murphy and Toda further teaches the operational state information of at least one of the terminal is indicative of a low battery voltage condition of the first mobile terminal (see Toda, column 4, lines 12-21).

Regarding claim 57, the combination of Murphy and Toda further teaches the operational state information of at least one of the terminals is indicative of the terminal being turned off (see Toda, column 4, lines 12-21 and column 10, lines 45-50).

Regarding claim 58, the combination of Murphy and Toda further teaches the operational state indicative of a low signal strength condition experienced by the terminals (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "strength").

11. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Toda (US 6,275,713) and further in view of Wooten et al (US 6,084,870).

Regarding claim 22, the combination of Murphy and Toda teaches continuously transmitting the state information of the originating side terminal to the base station (see Murphy, column 2, lines 1-9 and column 2, lines 28-37). The combination of Murphy and Toda does not specifically disclose updating a memory of the base station.

Wooten teaches updating a memory of the base station (see column 17, lines 12-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Wooten into the system of

Murphy and Toda in order to provide a novel and improved method and apparatus for utilizing communication systems (see Wooten, column 1, lines 11-16).

12. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Toda (US 6,275,713) and further in view of Hayashi (US 6,650,913).

Regarding claim 24, the combination of Murphy and Toda teaches the method of claim 21. The combination of Murphy and Toda does not specifically disclose the call termination message is generated by a call termination button of a terminal key panel unit or as a result of detection of a terminal folder or flip closing.

Hayashi teaches the call termination message is generated by a call termination button of a terminal key panel unit or as a result of detection of a terminal folder or flip closing (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of the combination of Murphy and Toda in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

13. Claims 26, 28, 37, 50-53, 59 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Oota et al (US 2003/0064708A1).

Regarding claims 26, 37, 50, 59 and 66, Murphy teaches a method of managing

calls in a mobile communication system (see Abstract), comprising: connecting a call between a receiving side terminal and an originating side terminal through a base station (see Murphy, column 2, lines 1-9 and column 2, lines 28-37), receiving state information of the receiving side terminal in the base station, generating a call termination message (see Murphy, column 2, lines 1-9 and column 2, lines 28-37), receiving state information of the originating side terminal in the base station, (see Murphy, column 2, lines 1-9 and column 2, lines 28-37), wherein the first and second mobile terminals are subscriber terminals and wherein the call is re-established between the first and second mobile terminals through a signal path that does not pass through an intervening or repeating subscriber terminal (see column 2, lines 24-35, see "again").

Murphy does not specifically disclose displaying state information of the originating side terminal in the receiving side terminal, wherein the state information includes battery information of the originating side.

Oota teaches displaying state information of the originating side terminal in the receiving side terminal, wherein the state information includes battery information of the originating side (see [0031]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Oota into the system of Murphy in order to enable users to recognize that a multimedia file containing no image data is being normally reproduced (see Oota, [0008]).

Regarding claim 28, Murphy teaches the call termination message is generated from the receiving side terminal or transmitted from the base station (see Murphy, column 2, lines 1-9 and column 2, lines 28-37).

Regarding claim 51, Murphy further teaches the first mobile terminal is a called terminal and the second mobile terminal is a calling terminal (see Murphy, column 2, lines 1-9 and column 2, lines 28-37).

Regarding claim 52, Murphy further teaches the receiving and updating steps are performed in a base station ().

Regarding claim 53, Murphy further teaches detecting termination of a call between the first and second mobile terminals and performing the transmitting step after said call termination (see Murphy, column 2, lines 1-9 and column 2, lines 28-37).

14. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Oota et al (US 2003/0064708A1) and further in view of Wooten et al (US 6,084,870).

Regarding claim 27, the combination of Murphy and Oota teaches continuously transmitting the state information of the originating side terminal to the base station (see Murphy, column 2, lines 1-9 and column 2, lines 28-37). The combination of Murphy and Oota does not specifically disclose updating a memory of the base station.

Wooten teaches updating a memory of the base station (see column 17, lines 12-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Wooten into the system of Murphy and Oota in order to provide a novel and improved method and apparatus for utilizing communication systems (see Wooten, column 1, lines 11-16).

15. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable Murphy (US 6,236,326) in view of Oota et al (US 2003/0064708A1) and further in view of Hayashi (US 6,650,913).

Regarding claim 29, the combination of Murphy and Oota teaches claim 26. The combination of Murphy and Oota does not specifically disclose a detecting sensor for judging whether a flip or a folder of the first mobile terminal is opened.

Hayashi teaches a detecting sensor for judging whether a flip or a folder of the first mobile terminal is opened (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of Murphy and Oota in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

16. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Oota et al (US 2003/0064708A1) and further in view of Chapman et al (US 4,775,995).

Regarding claim 54, the combination of Murphy and Oota teaches a method of managing communications in a mobile communication system (see Murphy, Abstract), comprising: storing state information transmitted from a first mobile terminal (see Murphy, column 4, lines 17-44), the state information indicative of a signal strength of the first mobile terminal (see Murphy, column 2, lines 1-9 and column 2, lines 28-37) monitoring a call connection between the first mobile terminal and a second mobile terminal and transmitting the stored state information (see column 3, line 47 to column 4, line 17, and column 4, lines 37-44, column 4, line 63 to column 6, line 12, the signal strength of the mobile terminal depends on the signal or the level of energy of the battery) transmitted from the first mobile terminal to the second mobile terminal when the call connection between the first and second mobile terminals is terminated (see Murphy, column 2, lines 1-9 and column 2, lines 28-37).

The combination of Murphy and Oota does not specifically disclose storing, state information in a base station.

Chapman teaches storing, state information in a base station (see column 9, lines 44-48 and column 10, lines 5-9, see "*signal strength value*" and it reads on applicant's "*state information*").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Chapman into the system of Murphy and Oota in order to provide an improved method and arrangement for adaptively controlling the amount of adjacent channel interference (see Chapman, column 2, lines 46-49).

17. Claims 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,236,326) in view of Oota et al (US 2003/0064708A1) and further in view of Toda (US 6,275,713).

Regarding claim 64, the combination of Murphy and Oota teaches 59. The combination of Murphy and Oota does not specifically disclose a detector which detects an interruption of a call with the other terminal and a processor which automatically transmits a recall signal based on the detected call interruption.

Toda further teaches a detector which detects an interruption of a call with the other terminal and a processor which automatically transmits a recall signal based on the detected call interruption (see Toda, column 6, lines 11-19 and see Abstract and column 1, line 55 to column 4, lines 21, "automatically").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Toda into the system of Murphy and Oota in order to provide a cellular phone capable of smoothly reinitiating a call (see Toda, column 1, lines 5-9).

Regarding claim 65, the combination of Murphy, Oota and Toda further teaches the call interruption is a network failure (see Toda, Abstract and column 1, line 55 to column 4, lines 21, see "disconnection").

Response to Arguments

18. Applicant's arguments with respect to claims 1, 3, 5-8, 10-30, 33-37, 40, 41, 43-46 and 50-59 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571)272-7911. The examiner can normally be reached on 9:30am-8:00pm Monday-Thursday.
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
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Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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